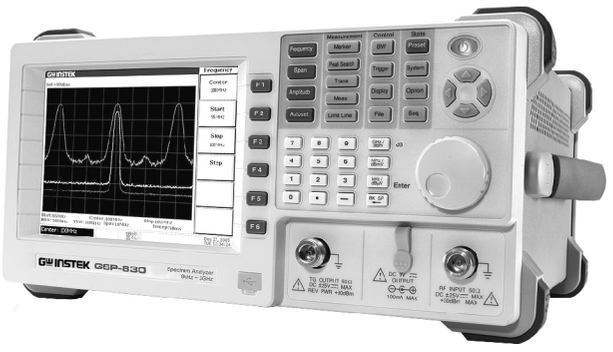
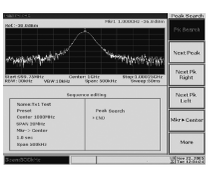
3GHz Spectrum Analyzer



GSP-830

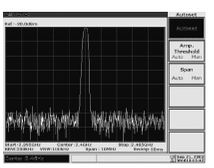
FEATURES

- Low Noise Floor(-117dBm@1GHz, 3k RBW)
- Autoset Function
- Sequence Programming Functions
- ACPR, OCBW, Channel Power, N-dB and Phase Noise Measurements
- Pass/Fail Test with Limit Line Editing
- 5 Markers with△ Marker
- Peak & Sorting
- Split Windows Allow Separate Settings
- AC/DC/Battery Multi-Mode Power Operation
- USB/RS-232C/GPIB(Optional) Interface
- Direct VGA Output
- 6.4" TFT Color LCD, Resolution: 640x480
- Compact Size,330(W)x170(H)x340(D)mm
- Light Weight of 6kg Without Options
- Optional Tracking Generator



Sequence

Front panel operations can be automated with built-in Sequence programming functions.



Autoset

Signal is automatically measured and located at the display center with default or specified settings.

GW Instek now extends its spectrum analyzer product series up to 3 GHz. As a new member, GSP-830 inherits advantages of high performance, low cost, easy to use and varied portability. Moreover, its fabulously low noise floor enhances measurement range; advanced user interface brings you great visual distinction; rich measurement functions make your work simple. GSP-830 offers you the greatest performance-price ratio in the market!

Wide Measurement Range

With GW Instek in-house state-of-the-art design, GSP-830's outstanding noise floor level, -152dBm/Hz @ 600MHz, presents extreme sensitivity for picking up weak signals. Along with GAP-801 10dB-gain preamplifier, GSP-830 has the equivalent noise floor level as low as -162dBm/Hz, thus widely extends the measurement range.

Automated Measurement

GSP-830 can be automatic test equipment without any remote control. Users can define their own macros through the keypad on the front panel and stored in 10 Sequence sets. Running sequence can be paused for measured result observation or staff intervention. Repeat or Single run mode can be selected for different applications. Sequence function can quite fit for production and education.

Portable Operation

Equipped with two packs of Li-Ion battery, offering more than three hours of uninterrupted operation, GSP-830 can break the limitations of power cords and is suitable for outdoor usage. The DC operational mode allows running GSP-830 by 12-Volt power supply, or by standard cigar-lighter inside automobiles. With only 6kg lightweight and compact size, GSP-830 is real portable field-service equipment. Large-size internal memory, helps store measured traces, setup info, limit lines and user-defined macros, accompanies with popular USB flash drive improve convenience for exterior usage.

Advanced User Interface

User-oriented interface design gives you the pleasure of operating complex functionalities at will. A high-resolution 6.4" color TFT LCD provides high quality image display. Traces are drawn in different colors, allowing recognition of small disparities at a glance. Split window mode delivers the ability for monitoring two different bands on the same display, making user have two alternate-sweep spectrum analyzers in one single unit.

Feature-Rich Interface

The front panel USB host connector supports the ubiquitous USB flash drive for various file transactions, such as setup info, trace data, and display images. In addition, it also supports printers with USB ports for direct print out. The rear panel USB On-The-Go, or OTG, connector can play as host or slave. As a slave, it gives accessibility to remote control from PC software. RS-232C and optional GPIB are available as well. VGA output on the rear panel sends the display image directly to external monitors, which might be a must at EMC test site, or to projectors, which is very effective in presentations.

Cost effective

GSP-830 is your economical spectrum analyzer. GSP-830's affordable price always meets your budget. Unceasing service support plus one full year global warranty coverage, users can rely on GSP-830 more.

Free PC Software for GSP-800 Series

The new EagleShot PC software integrates communication links to GSP-800 Series, providing user-friendly interface to monitor both spectrum analyzers in varied applications. User can switch the spectrum analyzer to SA mode or EMC mode. Multiple built-in EMC criterions help user judge the measured results more easily. Through EagleShot, you can capture and store screen images or print out trace data directly via RS-232C or USB interfaces, making document analysis for measurement more facilitated.

APPLICATIONS

- Field Service of GSM Cell Site
- Installer/Maintainer of WLAN
- RF Component Manufacture (VOC , Filter, Amplifier...), Production Of Cordless Phone and Wireless Products
- Maintenance of Broadcast Radio/Television and CATV
- Maintenance of Industrial Factory Wireless Automation
- Pre-Compliance Testing
- Education of RF/Wireless Lab

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SPECIFICATIONS

FREQUENCY	**Frequency Range**	9kHz ~ 3GHz
	Aging Rate	±10ppm, 0-50°C, 5ppm/yr
	Span Range	2kHz ~ 3GHz in 1-2-5 sequence, full span, zero span
	Phase Noise	-80dBc/Hz @1GHz , 20kHz offset typical
	Sweep Time Range	50ms ~ 25.6s
RESOLUTION BANDWIDTH	**RBW Range**	3kHz, 30kHz, 300kHz, 4MHz
	RBW Accuracy	15%
	Video Bandwidth Range	10Hz ~ 1MHz in 1-3 steps
AMPLITUDE	**Measurement Range**	-103dBm ~ +20dBm, 1MHz ~ 15MHz , Ref. Level≧-30dBm -120 ± 1dBm~+20dBm, 15MHz ~600MHz, Ref. Level@-50dBm -117 ± -1dBm~+20dBm, 600MHz~2.3GHz, Ref. Level@-50dBm -115 ± 1dBm~+20dBm, 2.3GHz ~ 3GHz
	Overload Protection	+30dBm, 25VDC
	Reference Level Range	-110dBm ~ +20dBm
	Accuracy	± 1dB @100MHz
	Frequency Flatness	± 1dB
	Display Range Linearity	± 1dB over 70dB
DYNAMIC RANGE	**Average Noise Floor**	-135dBm/Hz, 1MHz ~ 15MHz , Ref. Level≧-30dBm -152 ± 1dBm/Hz, 15MHz ~ 600MHz, Ref. Level@-50dBm -149 ± 1dBm/Hz, 600MHz ~ 2.3GHz, Ref. Level@-50dBm -147 ± 1dBm/Hz, 2.3GHz ~ 3GHz
	Third Inter-Modulation	< -70dBc @-40dBm Input , Ref. Level@-30dBm
	Harmonic Distortion	< -60dBc RF Input < -40dBm, Ref. Level@-30dBm
	Non-Harmonic Spurious	< -110dBm @3kHz RBW
GENERAL	**Display**	640 x 480 high resolution color TFT LCD
	Internal Memory	10 Traces , 10 Setup info , 10 Limit lines , 5 Corrections , 10 Sequences
	Markers	10 Markers for peaks; 5normal-delta marker pairs ; Functions: Delta , Peak , Marker Track
	Trace Detection	3 traces with Peak, Maximum hold, Freeze, Average and Trace math
	Power Measurement	ACPR, OCBW, Channel power, N dB BW, and Phase jitter
	Autoset Function	Auto tuning the measurement result for observation
	Sequence	Automated test by uesr-defined macros without any remote control
CONNECTORS	**RF-Input**	Type: N female, 50Ω nominal ; RF input VSWR: <2 : 1 @ 0dBm Ref. Level
	External Reference	Type: BNC female,
	Clock Input	1M, 1.544M, 2.048M, 5M, 10M, 10.24M, 13M, 15.36M, 15.4M, 19.2M
	External Trigger Input	Type: BNC female, accept +5-V TTL signal
	Reference Clock Output	Type: BNC female, 10MHz
	DC Input	Jack: 5.5mm, 12V
	RS-232C	Sub-D 9 pins female
	USB Connector	Front panel: type A receptacle ; Rear panel: type mini-B receptacle
	DC Voltage Output Terminal	Type: SMB male, outputs +9V/100mA max.
POWER SOURCE	AC 100 ~ 240V, 50/60Hz	
ACCESSORIES	Power cord x 1 , User manual x 1	
DIMENSIONS & WEIGHT	330(W) x 170(H) x 340(D) mm, Approx. 6kg	

OPTION LIST

Opt. 01 Tracking Generator	Frequency Range 9kHz ~ 3GHz Amplitude Range -50dBm ~ 0dBm Amplitude Accuracy ±1dB@100MHz, 0dBm Amplitude Flatness ±1dB@0dBm Harmonics <-30dBc typical Reverse Power +30dBm Impedance Type: N female, 50Ω nominal TG output VSWR < 2 : 1
Opt. 02 Battery pack	10.8V Li-Ion battery pack x 2
Opt. 03 ±1ppm Stability	±1ppm , 0 ~ 50°C, ±1ppm/yr
Opt. 04 300Hz RBW	RBW 300Hz, 3dB bandwidth RBW accuracy : 15%
Opt. 05 9kHz & 120kHz RBW(*)	RBW selections : 9kHz and 120kHz, 6dB bandwidth RBW accuracy : 15%
Opt. 06 10kHz & 100kHz RBW(*)	RBW selections : 10kHz and 100kHz, 3dB bandwidth RBW accuracy : 15%
Opt. 07 AM/FM Demodulator & 10kHz & 100kHz RBW(*)	Demodulation : AM , FM Output : internal speaker, 3.5mm stereo jack wired for mono operation RBW selections : 10kHz and 100kHz, 3dB bandwidth RBW accuracy : 15%
Opt. 08 GPIB Interface	IEEE 488 bus

OPTIONAL ACCESSORY

GSC-001 Soft Carrying Case	Soft carrying case
GKT-001 General Kit set	ADP-002: adaptor, SMA(J/F) ~ N(P/M) x 2 ATN-100: 10dB attenuator, N(J) ~ N(P) x 1 GTL-303: RF cable assembly(SMA(P),RD316,600mm)x2 GSC-002: Kit box x 1
GKT-002 CATV Kit set	ADP-001: adaptor, BNC(J/F) ~ N(P/M) x 2 ADP-101: adaptor,BNC(J/F)75Ω~BNC(P/M)50Ω x 2 GTL-304: RF cable assembly(RG223,N(P)-N(J),300mm)x2 GSC-003: Kit box x 1
GKT-003 RLB Kit set	GAK-001: termination 50Ω, N(P) x 1 GAK-002: Cap with chain, N(P) x 1 GTL-302: RF cable assembly(RG223,N(P),300mm)x2 GSC-004: Kit box x 1
GTL-401 DC Power Cord	DC power cord with DC Jack and lighter plug,Current 5A
GAP-801 Pre-Amplifier	GAP-801: Pre-amplifier with 10dB(typical) 9kHz ~ 6GHz

NOTE : 1. (*) Only one option can be selected among Opt. 05 to 07.
2. Opt. 01 & 03 to 07 are factory-installed.

Specifications subject to change without notice. SP-830GD0DH

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